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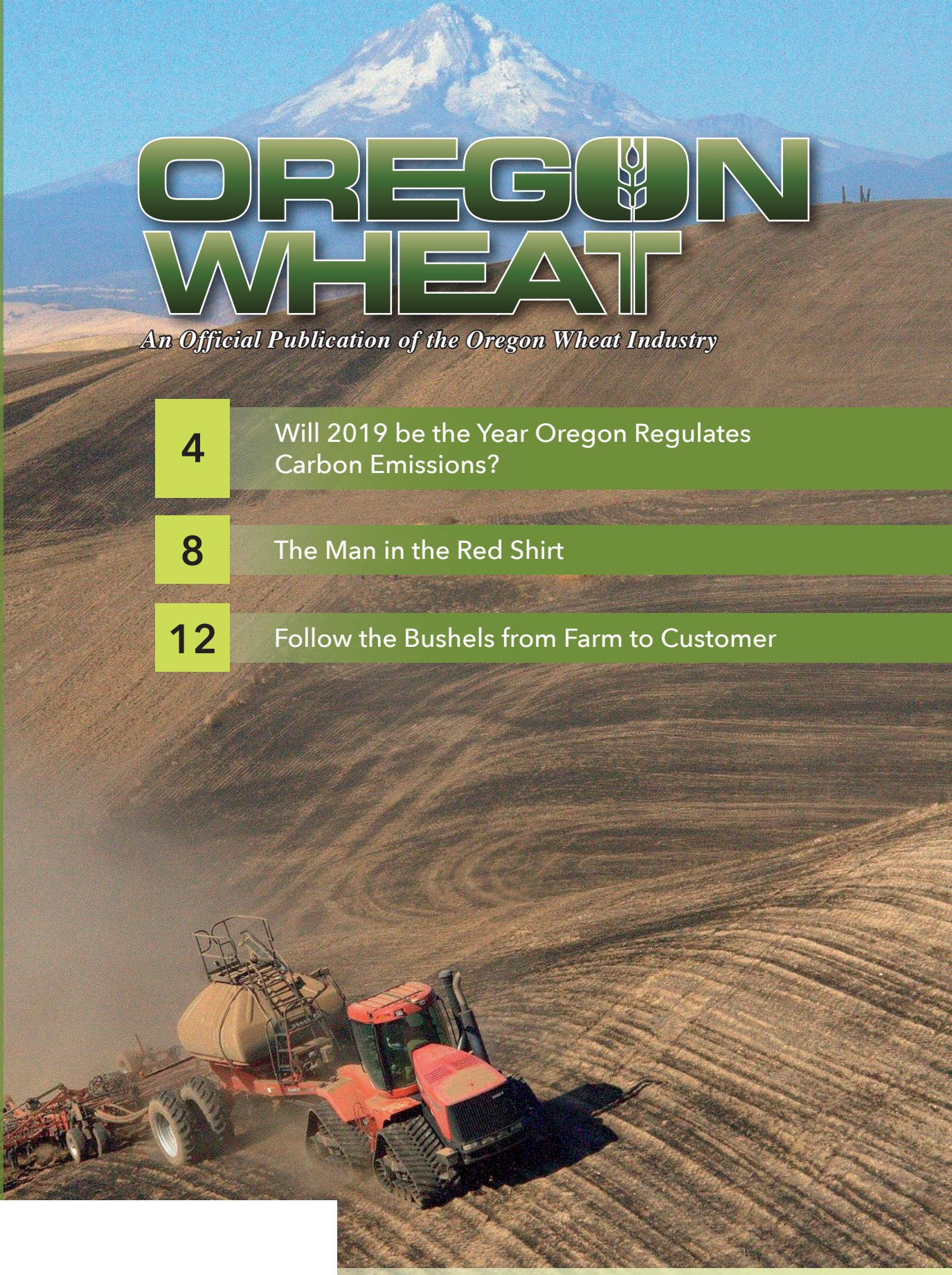
OREGON WHEAT

An Official Publication of the Oregon Wheat Industry



OREGON WHEAT GROWERS LEAGUE
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IN THIS ISSUE

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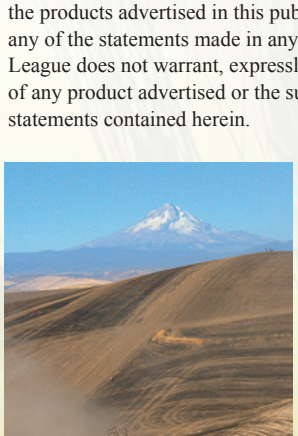


Cover: 'Seeding through the ashes of summer's fire'

– John McManigal, photographer

Brent Cheyne
President

It is an Honor to Have Served You...

It seems nearly impossible that my one-year term as President of the Oregon Wheat Growers League is coming to a close. I can in all honesty say that it was pretty easy because I had an Executive Committee, Board of Directors and League Staff with me all the way. THANK YOU to each and every one of you; your help was greatly appreciated. The Past Presidents of the League whom I served under coming up through the ranks set the bar very high and we all owe them a debt of gratitude for keeping our organization very strong and healthy through the years.

It is intriguing to know you are a very small cog in the big wheel that helps shape the future of the wheat industry. When all the major wheat producing states work together for the common good of the industry, it is fun to be a part of the effort. All in all, it was a very enjoyable experience that I will miss. Good friends were made along the way and these friendships will last the rest of my life, which is the very best part of being involved.

I mentioned in the last article that the Farm Bill seemed to be moving forward. That progress came to an abrupt halt. Like the Tin Lizzie that ran out of gas, it sputtered and stopped moving. We will have to wait until Congress reconvenes after the election, to see if the "engine" is idling or completely dead. I know that the House and Senate staff have continued to meet,

Auto steer lets the combine operator multi-task. Brent uses technology to increase his productivity. Cheyne Farm photo.

A full bin is a good sign – 2018 barley harvest in Klamath County. Cheyne Farm photo.

but there has been no confirmed progress as of this writing.

Last week, while reading an internet article about jobs that will not exist in ten years, I was very surprised to see that farmers made the list. However,

"There are three kinds of lies: lies, damn lies and political ads."

it did go on to say we will not go the way of the dinosaur, just that there will be a lot less of us. I guess that might mean the trend to fewer and larger farms will continue or that more farm jobs will be replaced by advances in "mech and tech". Perhaps it's a little of both. The marvels of technology and innovation may be the unraveling of the small family farm.

There was a bright spot in the report; telemarketers were tabbed to go away. There goes my best source of cheap entertainment.

2018 has proved to be very challenging for many of us; fires, water problems, wolves, tariffs, regulations, political woes, etc. Next year may not look much different, but we'll pay our money, take our chances, and see what the future brings…just like farmers always have. Farming is a great way to live and work and I am still happy to be along for the ride.

Will 2019 be the Year Oregon Regulates Carbon Emissions?

Blake Rowe, CEO, Oregon Wheat

As one of the most environmentally conscious states in the U.S., Oregon has been at the leading edge of environmental protection for decades. The list of policies and programs that have provided environmental and conservation benefits, reduced pollution, protected species, and improved public safety is a long one and, yes, many have helped us to do our jobs better - grow more wheat with fewer inputs and a smaller environmental footprint - although they haven't always made us more economically sustainable.

Climate change and the role of carbon emissions have taken a larger and larger role in our state's discussions about environmental protection since about 2007. Passage of the Renewable Portfolio Standard (RPS) in 2007, which was updated in 2016 through the Coal-to-Clean legislation, placed Oregon on an aggressive course to reduce carbon emissions by expanding renewable power to 50% of our energy mix by 2040 and eliminate coal generation from the mix by 2035. Another major step in reducing carbon emissions was taken in 2009, with the passage of the Oregon Clean Fuels Program (the Renewable Fuels Standard or RFS), which was fully implemented in 2016. The RFS has a goal of reducing the carbon intensity of transportation fuels, which account for about one third of our state's carbon emissions, by 10% in 10 years. Both programs have and will continue to reduce carbon emissions for years to come. Both have raised and will continue to increase our costs to produce and deliver wheat to our customers; costs many of our competitors around the world don't face.

The League has been fully, and often frustratingly, engaged in this issue for many years. Many of our concerns and questions have been raised repeatedly, but we still don't know if they will be adequately addressed in whatever legislation is introduced.

Over the same ten-plus years, we have seen increasing pressure for Oregon to adopt a direct, state-based, regulatory program to further reduce carbon emissions, beyond what will be achieved by the RPS and RFS programs. Legislative proposals, usually referred to as "Cap & Trade" (C&T) or "Cap & Invest", with the backing of Governor Brown, Democratic leaders in both the Oregon Senate and House, likely most Democratic Party legislators, and a laundry list of advocacy groups, appear poised to pass a C&T bill in the 2019 Session.

The League has been fully, and often frustratingly, engaged in this issue for many years. Many of our concerns and questions have been raised repeatedly, but we still don't know if they will be adequately addressed in whatever legislation is introduced. Our major concerns with the basic structure that we expect to see in the C&T legislation for 2019 include:

- **GROWERS** will face additional costs to grow and deliver their wheat, but with no significant reduction in the expected costs of climate change. While the proposed legislation is unlikely to regulate direct emissions from on-farm activities, costs for our major inputs, including all types of energy, transportation, and inputs like fertilizer will go up. However, the reduction in carbon emissions from an Oregon C&T program will not be enough to make any significant change in global climate trends. Higher costs now via a C&T program will not help us avoid higher costs later due to expected climate change.

- **WE SELL** roughly 90% of our wheat production into a highly competitive global commodity market. We can't pass on higher production and transportation costs to our customers, so C&T costs will further reduce already small margins and likely cost us market share. We have raised this point repeatedly with legislators with no sign of any realistic solution.

- **LEGISLATIVE LEADERS** are determined to connect Oregon's carbon program to the Western Climate

Initiative. After some study, we have determined that the administrative requirements of that system make it highly unlikely that wheat growers will be able to qualify to sell allowances or receive offsets (credit for carbon emission reductions) to help recover our higher operating costs.

• **IT IS LIKELY** that critical details of how the C&T program will work will be left to a massive rule-making process to be conducted by the Department of Environmental Quality, a very unfriendly arena for farmers in recent years. Our attempts to gain some certainty by setting "sideboards" on the potential rules has been largely unsuccessful.

• **GROWERS** who have been early adopters will be penalized by being ineligible for any grants of allowances or offsets. Adopting practices like no-till systems or precision ag practices will also be unlikely to qualify for allowances or offsets because they are already used by enough growers to be considered standard operating practices.

• **CRITICAL RESEARCH** that could help growers to reduce carbon emissions and adapt to climate change are unlikely to receive any funding from the C&T revenues.

The odds may favor C&T legislation moving forward in 2019, but we don't think the fight is over yet. The elections and the outcome of Ballot Measure 104 may change the legislative landscape. Regardless of the outcome, we will continue to engage the carbon issues to make sure that any system is workable for our growers.

Market Update

Mike Krueger, The Money Farm

The wheat market, like every other market this year, has been adversely impacted by the politics of trade. This has hurt wheat even though successful trade agreements have been concluded with Mexico, one of our largest wheat customers. The hangover from the lingering trade dispute with China has had far-reaching impacts on the other grains and oilseeds because it has created market uncertainty. Trade disputes, mid-term elections, a strong dollar, chaotic equity markets, etc., etc., have overwhelmed what could still be a more bullish marketing year for wheat.

World wheat production among the major wheat exporting countries suffered numerous setbacks in 2018. Drought resulted in sharp reductions in wheat production in Russia, the European Union, Australia, and Argentina. Poor harvest weather also lowered production and affected quality in northern Europe, parts of Russia and across Saskatchewan and Alberta. 2018 production among the major wheat exporting countries could be down as much as a billion bushels. Exportable quantities will also be considerably lower than a year ago. The

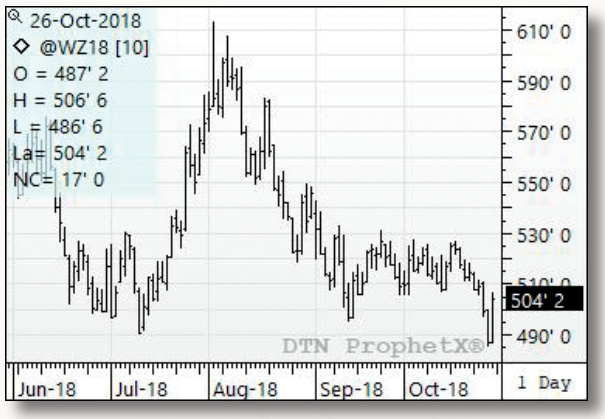
- Continued on page 6

United States is the only major wheat exporting country that had a larger crop in 2018 than in the previous year.

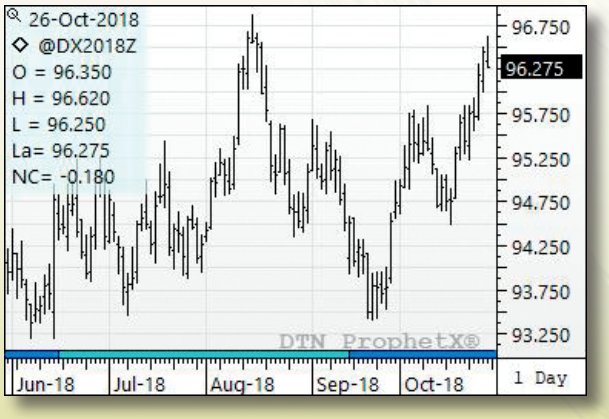
Why can't wheat rally when world stocks are smaller and U.S. wheat exports are expected to be larger than last year? There are number of reasons:

• **RUSSIA** has continued a very aggressive wheat export program even though they had a much smaller crop and that crop has some quality issues. The chart below shows Russian wheat production and exports:

• **THE DOLLAR** has been strengthening.



• **CORN AND SOYBEAN** futures have been weakening through the mid-point of record harvests. That weakness has also pressured wheat futures and created a bearish technical picture.



The real problem with wheat is that the pace of U.S. wheat export sales has not yet reflected the smaller production among the world's wheat exporting countries. The USDA is projecting an increase of 125 million bushels (3.4 MMT's) in U.S. wheat export sales over last year. White wheat exports are projected to increase 22 million bushels from last year. We are running behind the pace needed to achieve that increase, but we still have seven months of this marketing year to accomplish this objective. Most analysts believe that Russia's very aggressive export sales pace is the result of the commercial grain companies in Russia being concerned the government might eventually curtail or suspend wheat exports. That hasn't happened yet. Most analysts also believe the pace of U.S. wheat export sales will start to accelerate in the last half of this marketing year (January forward). This is the most critical ingredient necessary to sponsor a rally in wheat prices.

There are also some concerns looking ahead to the world's 2019 wheat crop. The drought that plagued much of Europe and the Black Sea region during the summer of 2018 has not been "cured". This drought has continued to impact the 2019 winter wheat crop across a very wide area. The market won't trade 2019 crop concerns now, but conditions should be watched throughout the winter and early spring. There were also early concerns about drought across Argentina's wheat belt in August and September. It seems likely that crop will be smaller than expected. The U.S. southern plains have recovered from drought conditions, but the Pacific Northwest drought has intensified.

The big elephant in the marketing room continues to be the trade dispute with China. China is the world's biggest importer of soybeans by a very wide margin. The U.S. exported nearly one billion bushels of soybeans to China in the last marketing year. That was more than 50% of our total soybean export sales. The 25% tariff on U.S. soybean imports to China will reduce that export total significantly. Much of that loss will be made up from other destinations. Brazil simply can't supply the entire world. It will represent a major change in soybean trade flows. China has also said they intend to reduce total soybean imports by 10 to 20 MMT's by reducing the amount of soybean meal in their feed rations. That would have big implications for their hog industry.

The long term concern is that if China can reduce soybean imports it is a significantly bearish factor. Less China demand would mean less world demand. That would force soybean farmers to plant fewer acres of soybeans and more acres of other crops, like corn and wheat.

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The Man in the Red Shirt

Wally Powell, Chair, Oregon Wheat Commission

I have now been a member of four or five different trade teams to Asia. Each trip has been extremely tiring; and yet, when I get home, I realize how much I have learned. We listen, we observe, we ask questions; and we try to build market share for U.S. wheat. These are your customers.

The gentleman in the red shirt in the photo above, in a way, is our customer. His employee is in the yellow shirt to the rear of the picture. The room we are standing in, which is the back room of his house, is a noodle production facility in a suburb of Jakarta, Indonesia. To the right of the employee is a mixer mixing dough. To his left is a set of rolls for rolling the dough out to a thin 12-inch-wide sheet. The table on the left of the picture is a noodle slicing machine, also about 12 inches wide.

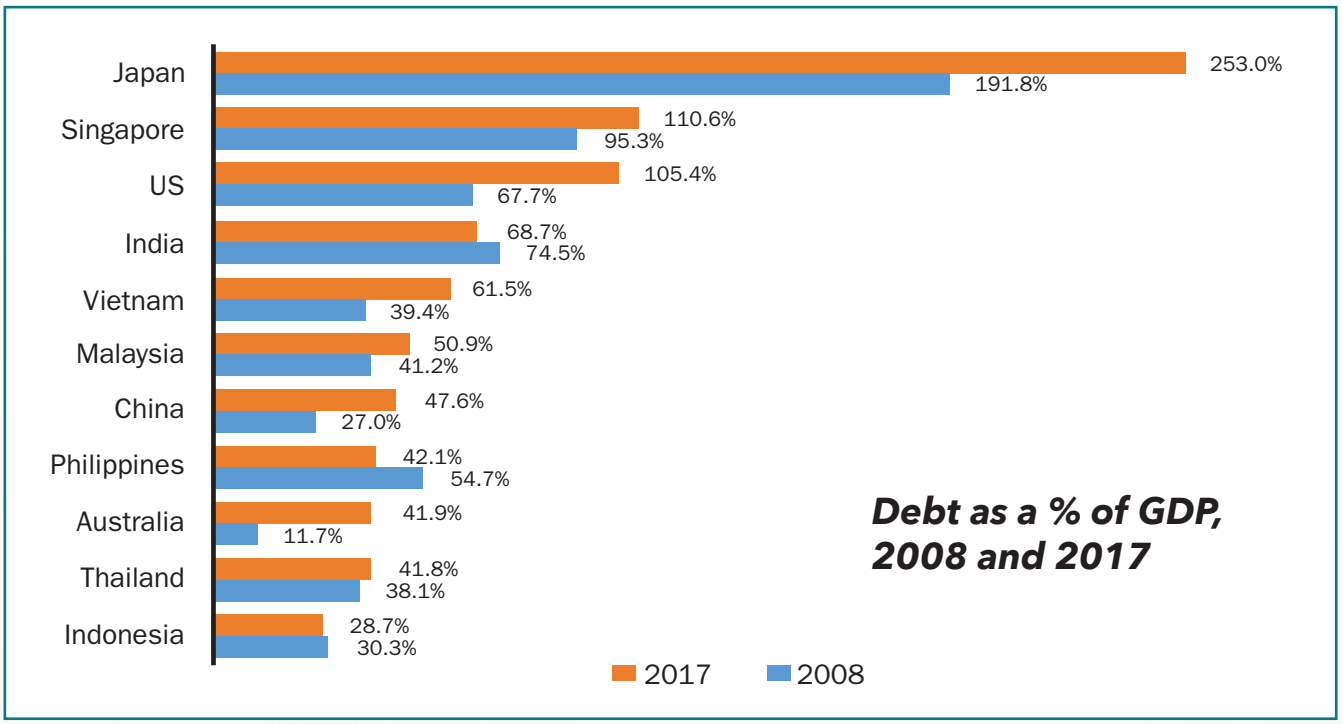
Each morning about 40 small carts pull up to the back door of the house, load up noodles, and spread out across several outdoor markets. This takes place every morning. I don't think I have seen any business owner prouder than this man was when we toured his 10 by 16-foot facility.

First Pacific Company Limited

Prior to the visit with the Man in the Red Shirt, we met with IndoFoods. IndoFoods has one of the largest, if not the largest, ramen noodle plants in the world. Six days per week, week in and week out, five stainless steel mesh belts about five feet wide, each supported by two large dough mixers, cut, steam, fry, and package ramen noodles for shipment across South Asia. The largest stockholder of IndoFoods is First Pacific Company Limited, publicly traded on the Hong Kong Stock Exchange. First Pacific has holdings in the Philippines as well. Bogasari is the flour milling arm of IndoFoods, with about 50% of the milling business in Indonesia and an annual capacity of 3.9 million tons. Bogasari also has PanaMax class vessels loading and delivering wheat to Bogasari Mills. Just as IndoFoods uses Bogasari flour, so does the man in the red shirt. All three are our customers. But, while there are very few IndoFoods in Indonesia, there are a ton of small business men and women in all different colored shirts. These small operations are the base that caters to the bulk of the Indonesian population. That is the kind of contrast we see all across large parts of Asia.

Indonesia Today

Indonesia has about seven times the land base of Oregon; with a population of 268 million people. The median age of Indonesia's population is 28 years; ten years younger than the United States. The Gross Domestic Product per Capita (GDP) of Indonesia is 3800 American dollars. This compares with the United States level of 59000 dollars per capita. A person reads a lot about developing country debt in the news today, and Indonesia is one of those countries.



Indonesian government debt, through 2017 stands at 30% of GDP. Of greater importance probably, is the fact that only 30% of that debt is dollar dominated, with the rest dominated in the local currency. The 30% of GDP debt level is significantly less than that of many other nations, including our own.

I found the following interesting as well:

- 20% of the government's budget is mandated in Constitution to go toward education;
- 70% of Indonesia's population enjoys the benefits of a government supported health coverage program;
- Data from the Finance Ministry show that between 2014 and 2017 spending on education, health and infrastructure increased by 11%, 54% and 118%, respectively, while spending on the fuel subsidy decreased by 77% over the same period.
- Indonesia purchased 457,000 metric tons of Soft White Wheat during 2016/2017.

There is now a picture in the home of the Man in the Red Shirt. The picture includes the owner, his wife, US Wheat Associates Matt Weimer, and others. I would like to return to visit him again at some point to see how his efforts play out. His journey is in some ways similar to that of many Oregon Wheat producers. You start small, you buy an old tractor, you buy an old combine, you watch your expenses, you believe it will work, and…...

Good luck to the Man in the Red Shirt...

Understanding and Managing Genes for Resistance to Foliar Diseases in PNW Wheat Varieties

Chris Mundt, OSU Professor and Cereals Pathologist

As a cereals pathologist, much of my time is invested in providing the OSU Wheat Breeding Program with disease data to make decisions on lines to move forward towards commercial release as varieties, and in evaluating current and upcoming varieties to provide growers with a comprehensive evaluation of resistance to the many wheat diseases present in Oregon. At the same time, more basic studies are also undertaken to better understand the genetics of resistance, which may increase the efficiency of selection for disease resistance in the future. One significant concern is the ability of some plant pathogens to adapt genetically to disease-resistant wheat varieties.

Foliar diseases can cause substantial losses to Oregon wheat producers. Stripe rust is potentially devastating in all wheat-producing areas of the PNW owing to a favorable environment and highly aggressive rust races. The stripe rust situation changed dramatically about 15 years ago, when a new set of stripe rust races moved around the world. These races are not only more aggressive than older races, but also are more tolerant of temperature extremes. As a result, the high temperature adult plant resistance (HTAP), which is controlled by multiple genes of incomplete individual effect, is no longer highly effective as epidemics now begin much earlier in the season when neither high temperatures nor adult plants are present to "kick-in" HTAP resistance. As an alternative, so-called major gene resistance gives high levels of disease control, but the pathogen can rapidly develop new races, much like the way in which new strains of human influenza change over time. At present, only two major genes for resistance, *Yr5* and *Yr15*, provide control of all stripe rust races currently present in the U.S., and one should expect these genes to eventually be overcome by new pathogen races.

Development of durable resistance to stripe rust may be facilitated by genetically "dissecting" successful wheat varieties. A classic example is the variety Madsen. Released in 1988, Madsen has now maintained moderate-to-high levels of resistance to wheat stripe rust for 30 years, even in severe epidemics. Madsen was crossed with the highly rust-susceptible variety Foote, to develop 217 homozygous progeny lines over six generations in the greenhouse. Seed was subsequently increased in the field in a joint collaboration among myself, former postdoc Dolores Vazquez, current graduate student David Cobertera, and wheat breeder Bob Zemetra. The parents and progeny have been evaluated in five field trials. As an example, in the first trial, the average disease severity of the susceptible parent Foote was 82% and that of the resistant parent Madsen was 3.1%. Stripe rust severity of the 217 progeny ranged from more than that of Foote to less than that of Madsen; 13% of the progeny were more resistant than Madsen, including several with a rating of zero.

Genetic analysis of the progeny through the process of genotyping-by-sequencing showed that resistance was due primarily to an interaction between the gene *Yr17* and a previously unknown gene of smaller effect on chromosome 1AS. Though 80% of U.S. wheat stripe rust isolates show a susceptible

Why Does This Matter?

- **Stripe rust and Septoria leaf blotch can cause substantial yield losses**
- **Both pathogens are genetically variable and capable of adapting to varietal resistance**
- **Fungicides are costly and pathogens are developing resistance to them**
- **Increasing the durability of varietal resistance can reduce risk and need for fungicides**

reaction when tested against *Yr17* on seedlings in the greenhouse, this gene still provides some resistance at the adult plant stage. More importantly, several examples around the world show that combinations of other resistance genes with *Yr17* have provided durable resistance to wheat stripe rust, sometimes for decades. Earlier work suggested that this also is the genetic basis behind the highly effective stripe rust resistance in the variety Bobtail (see Oregon Wheat, December 2015). In fact, the best examples of durable resistance to wheat rust pathogens around the world have involved genes with a demonstrated ability to interact positively with other resistance genes. Madsen and Bobtail have been used extensively as parents in the OSU Wheat Breeding Program. Thus, it is likely that diverse gene combinations with *Yr17* exist. These resistance gene combinations may provide crucial protection against stripe rust if new stripe rust races evolve to overcome the major genes *Yr5* and *Yr15*.

In absence of stripe rust outbreaks, Septoria tritici blotch is the most important wheat disease in the Willamette Valley of Oregon. Septoria is one of the most genetically variable plant pathogens, owing to a very large number of fall infections that result from spores that are the product of sexual reproduction. Our one attempt to use major gene resistance to Septoria (in the variety Gene) resulted in a resistance failure within two years of significant commercial production. The Septoria pathogen has even been able to adapt, though much more slowly and not completely, to quantitative host plant resistance controlled by multiple minor effect genes. The recent development of resistance to fungicides in the pathogen has further put growers in jeopardy.

Both Madsen and Foote carry genes for moderate resistance to Septoria, and we hoped that some of these genes could be combined in the Foote x Madsen population. We selected 10 progeny lines with high stripe rust resistance and favorable agronomic type and tested them against Septoria in the following year. Three of the 10 lines were more resistant to Septoria than the moderately resistant variety Bobtail and two lines were equal in resistance to Bobtail, showing that it is possible to combine high resistance to stripe rust with moderate resistance to Septoria.

Though these lines performed well agronomically, they did not yield quite well enough to be released as varieties. They have, however, been used as parents in a project begun two years ago with Bob Zemetra to increase the level of resistance to Septoria.

Other lines used in the crosses include popular commercial varieties such as Bobtail and LCS Drive, which have high yield and moderate resistance to Septoria. The goal is to accumulate minor genes to provide higher levels of resistance to Septoria in high yielding backgrounds.

We are completing Septoria field trials with the Foote x Madsen population this year at two locations and will soon start analyses with genotyping-by-sequencing. Hopefully, this will provide some genetic marker information that will be useful in the breeding program.

Accumulating resistance genes to wheat diseases in progeny, and using these progeny as parents in future crosses, has great potential to increase both the level and durability of host plant resistance to disease. This will result in reduced risk of yield loss, reduced production costs, and less fungicide release into the environment.

ABSTRACT:

A combination of locations, production practices, and inoculation techniques will be used to provide high levels of disease pressure in trials of stripe rust, Cephalosporium stripe, Fusarium crown rot, strawbreaker foot rot, Septoria tritici blotch, and barley yellow dwarf virus. Data on sharp eyespot will be recorded in nurseries where this disease is naturally expressed at high levels.

Resistance levels of entries in elite and advanced yield trials will be determined to evaluate potential varietal releases and to allow growers to make the best varietal decisions when new varieties are first available to them. We will continue evaluating a Madsen x Foote molecular mapping population to evaluate the genetics of durable stripe rust resistance in Madsen and to evaluate and combine genes for quantitative resistance to Septoria from Madsen and Foote.

Improved markers will be developed in this and one other mapping population via genotyping-by-sequencing. Studies will be completed to test PNW-adapted wheat varieties for ability to suppress build-up of the take-all pathogen.

The overall project will result in data collection from more than 10,000 plot observations. The studies are crucial to continued progress in the OSU Wheat Breeding Program, increased profitability for Oregon wheat growers, and ability to adopt conservation tillage practices.

Headin' down river. John McManigal, photographer.

Follow the Bushels from Farm to Customer

Shawn Campbell

Farm to Country Elevator

The story of a bushel of wheat of course starts in the wheat field. It's the part of the story that everyone knows. After months of hard work and hoping for the right weather at the right time, farmers across Oregon harvest their crops and deliver them to their country elevators. Oregon's network of local elevators are the first primary holders of Oregon's wheat crop, with most farmers choosing to deliver to local cooperatives and private warehousing companies rather than hold their crops on their own farms. This makes these local elevators an important market player in the Pacific Northwest.

Testing, Testing, and More Testing

Upon delivering the fruits of their efforts to their local elevators, a farmer's wheat faces a series of inspection and grading tests that will decide whether or not they will receive premiums or discounts from the offered base price. These inspections include test weight, moisture, cleanliness, and possibly protein and falling number. While no farmer is a fan of receiving discounts, they are an important tool in maintaining the health of the Oregon wheat market by ensuring overseas buyers get the wheat they need.

Some 6700 miles across the Pacific, a large-scale cookie manufacturer in the Philippines is planning to buy soft white wheat flour. When contacting the local flour milling company, they are sure to require various types of rheological (product performance) testing; such as Farinograph, Extensograph, Alveograph, and Solvent Retention Capacity. These tests function in different ways, but they are all meant to tell the baker about the baking characteristics of the flour they are buying; the resulting dough's strength, elasticity, extensibility, and ability to absorb water. For a large-scale cookie manufacturer consistent performance of flour is a critical key to success.

Customers expect a certain taste, bite, and texture when they buy the company's product. The manufacturer needs the cookies to be of a certain diameter and height for the correct number to fit into standardized packaging. Deviation can result in lost customers. The wonders of modern food science have created many additives that correct for possible deficiencies in the quality of flour, but these additives can be expensive, and are increasingly disfavored by consumers who are demanding food labels be as free of additives as possible.

In order to meet the tight specifications of the cookie manufacturer, the flour milling company has to have equally tight specifications. While the flour miller can obtain some of the needed characteristics by blending various types of flours together, in the end it comes down to good quality flour needing good quality wheat. The flour miller has many different options when it comes to buying wheat; including the U.S., Australia, Canada, Russia, Argentina, France, etc.; but not all of these wheats are created equal. When it comes to making cookies, it's generally understood that U.S. soft white is the best wheat for the job. However, if it's not priced competitively with other wheats, the flour miller and the cookie manufacturer will look for ways to lower costs, such as blending in flour from lower quality wheats.

Unfortunately, for the flour miller, when buying wheat, it's impossible for them to use the same rheological tests as the cookie manufactures. The reason is that the rheological tests require flour, and the overall process to mill and then test flour takes far too long for it to be part of the inspection process that takes place when a bulk ocean vessel is loaded with wheat. Instead, the flour miller is forced to create specifications with other quicker, but less informative, testing methods; such as protein content and falling number. These tests don't give as much information as the more extensive rheological tests, so the miller is also forced to rely heavily on reputation and past experience when choosing what types of wheat to buy. That experience can strengthen a customer's confidence that the quicker tests will be predictive of flour quality and performance.

In addition to the end use quality tests, the miller will also include specifications that affect the milling process like test weight, moisture, and kernel damage and cleanliness. Larger and dryer kernels can increase flour milling yields, and kernels with less damage and dockage mean less cleaning and sorting prior to the milling process. This translates into better profitability, which is important given the tight margins and competitive nature of the flour milling industry in many countries.

Pricing and Shipping

The flour millers of course buy their wheat from the myriad of international grain trading companies, who own

A truck empties wheat into the hold. John McManigal, photographer.

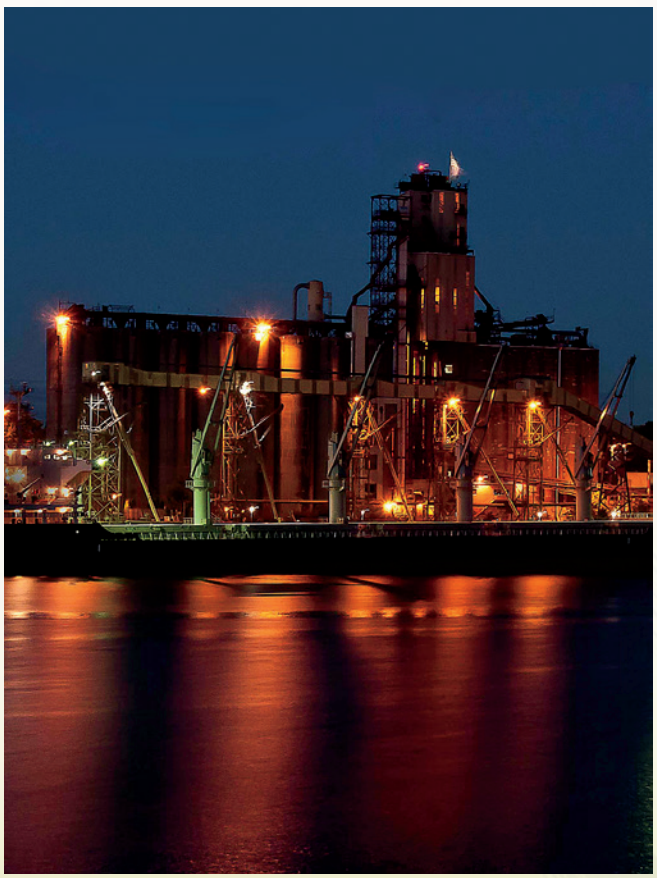
the export facilities needed to gather and load the needed wheat on to ocean-going bulk freighters. A fully loaded Panamax class freighter can hold 2.4 million bushels of wheat, roughly the equivalent of the wheat volume harvested from 42,000 acres, at Oregon's 2018 average yield of 57 bushels per acre. International grain traders negotiate the selling price of wheat to the flour millers based upon the price they believe they will pay to the country elevators, plus the added cost of inspection (by the Federal Grain Inspection Service (FGIS) and at times additional private inspectors if requested by the buyer) and loading the ship. At times the price can also include the cost of shipping the wheat overseas depending upon whether the contract is Free-On-Board (FOB) or Cost and Freight (C&F). In simple terms, FOB means the buyer takes ownership of the wheat as soon as it's loaded on the ship, and C&F means the seller retains ownership until it arrives at its final destination. Whichever party takes responsibility for the shipping arrangements and cost of ocean freight takes on the added risk and the wheat price is adjusted accordingly.

In today's market, margins for grain exporters tend to be quite tight given the large supply of wheat in the world, forcing exporters to at times even settle for negative margins in order to make a sale. Aside from taking advantage of small price differentials between sellers and buyers, grain exporters have two main strategies for improving their profitability. First, exporters try to correctly forecast moves in the market in order to take advantage of changes in prices between the time they contract to ship the wheat and actually buying it. By utilizing futures markets and other hedging tools, they are able to lock in prices when advantageous. However, this strategy only works if advantageous prices actually occur. The second and more reliable method is to buy wheat that may not meet quality specifications at a discounted price

and blend it with better quality wheat or wheat that has a quality issue involving a different specification.

Export terminals in essence act as pseudo-manufacturing facilities, blending different sources of wheat with different characteristics to meet a purchaser's specifications. Similar blending can occur at the country elevator level, but the exporters have an advantage in that they can potentially source wheat from many different co-ops and privately-owned warehousing companies. This wider diversity of sources gives them more flexibility in finding the wheat needed for blending to meet customers' needs.

When the grain exporters need to buy wheat for export, they put out a bid for delivery to the terminal. If the bid receives no offers from the country elevators they must raise the price. When deciding whether or not to sell wheat to the exporters, the country elevators have to take into account the price they bought the wheat at from the farmers, the cost of storing the wheat over time, and the added cost of moving the wheat to the exporters via barge, rail, or truck. The country elevators also have to take into account the amount of wheat they have in



Port terminal at night. Roland Smith, photographer.

Grain augered into an on-farm storage bin. Three Folds Farm, Madras.

storage, and whether or not they will have enough space to store the next year's crop. Similar to the exporters, the margins earned by the country elevators tend to be quite tight, but also as with the exporters, the country elevators can improve their profitability via using hedging to take advantage of changes in prices and via blending different qualities of wheat together.

Ultimately the local price of wheat is decided by the collective willingness of the farmer to produce and sell and the consumer to buy and consume. It's important to remember that the majority of the players in the international grain market are middlemen. They aren't growers or millers, but they provide the critical connections to make our markets work.

What does the OWGL do for you?

- Serves as your voice at the State and National levels of government during the creation and implementation of new laws and regulations.
- Partners with the National Association of Wheat Growers (NAWG) and other wheat states to lobby Congress on critical wheat issues.
- Represents Oregon's interests on the NAWG Board of Directors and NAWG committees. (www.wheatworld.org)
- Builds relationships with state and federal agencies to bring favorable changes to administrative rules and/or the creation of new programs.
- Partners with other organizations such as Oregonians for Food and Shelter, Associated Oregon Industries, PNW Waterways Association, and many others on agriculture and business policies.
- Member of the Wheat Foods Council, the national wheat education association, to promote the benefits of wheat based foods (www.wheatfoods.org).
- Publishes regular member communications: the bi-weekly newsletter, and the bi-monthly magazine (which is also mailed to all assessment-paying wheat growers, regardless of membership status).
- Identifies and trains future industry leaders.
- Organizes educational seminars and county grower meetings, and partners with Idaho and Washington for the Tri-State Grain Growers Association.
- Provides staff support for the Oregon Wheat Foundation and Oregon WheatPAC.
- Maintains the industry website and social media sites.

OREGON WHEAT

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Your Association — Your Voice

Join now!

Join today at owgl.org

or complete this form and mail to:

Oregon Wheat Growers League
115 SE 8th St., Pendleton, OR 97801

Farm/Business

Name:_____

Representative:_____

Address:_____

City:_____ST_____Zip_____

Phone:_____Cell:_____

Email:_____

Send my OWGL Newsletter via: ☐ US Mail ☐ Email

Producer/Landlord

____Member (Less than 320 Acres)……$125

____Member(320-2000 Acres)……$175

____Member (More than 2000 Acres)……$225

____Affiliate (Retired Grower or landlord)……$100

The above dues amounts include a pre-set Oregon WheatPAC donation of $25. If you wish to opt-out, reduce the above amount by $25. You may also opt to increase your PAC donation. Oregon State offers a tax credit of up to $100 for joint filers.

Additional WheatPAC Donation……$_____

Total Amount Paid……$_____

PAYMENT INFORMATION

Check #_____ *(To Oregon Wheat Growers League)*

Credit Card: ☐ **MasterCard** ☐ **Visa** ☐ **Discover**

Credit Card #_____Exp._____

Name on Card:_____

Signature:_____

Questions? Call the OWGL office: 541-276-7330

Grower Profile – Clint and Karen Reeder

Sally Christensen, OWGL Staff

William (known as W.H.) and Alice Reeder homestead and began farming near Helix in 1877. They built the first home on the farm within a year, and a then a larger home in 1892 on the same site.

As was typical of the day, outbuildings on the property in the early 1900's each had their own purpose: the machine shed, bull shed, grain bins, bunk house, milk house, wood shop, hog house, and the chicken houses.

The land passed from W.H. to his son Otha. When the second home burned down during the Great Depression, two new homes were built, one in 1938 for Otha and his wife, Maud, and one in 1942 for one of their three sons, Howard and his wife, Rachel.

It is the 1942 home in which Howard's oldest son, Clinton, and his wife Karen, raised their family. Clinton (Clint to friends) had a passion for the farm from his very earliest years. Clint earned his BS and MS degrees from Oregon State University, and a PhD in Agri-Business Economics from Purdue University. With the exception of two summers he was at Purdue, he has never missed a harvest season on the farm.

Each of the previous generations of farmers had their unique contribution to make: W.H. was the builder, Otha enlarged the farm size and ensured the farm survived the Depression, Howard maintained the farm through excellent farm practices, and Clint's contribution involved on-farm research plus off the farm work for the broader farm industry. He served as President of the Oregon Wheat Growers League in 1989, and President of the Oregon Wheat Foundation from 1992-1996. He was also active in all aspects of the agricultural industry from the local and county level to the Oregon Department of Agriculture, and the early years of the Wheat Marketing Center in Portland.

Harvest on the Otha Reeder Farm in 1916.

Three generations of the Reeder family in 2012.

From 1877 to date, wheat has been the primary crop, with some barley from time to time. Initially grain hay was also a major crop to feed the dairy cows, and horses that were used as pulling teams. Since Clint and Karen arrived in 1978, they have occasionally raised beef, primarily for their own use. More recently, they have experimented on a limited basis with a few other crops such as garbanzo beans, canola, lentils, dry peas and mustard.

The farm was certified a century farm in 2013. Partly due to extended life expectancy over the generations, Clint and Karen have spent the most continuous years owning and operating the farm. Clint and Karen are now in the process of transferring the farm to their nephew, Craig Reeder and his family, who will be the 6th generation.

Source: some content of this article was taken from the Century Farms application of Clint and Karen Reeder.

The Century Farm and Ranch Program is a non-profit, volunteer led program started in 1958, on the even of the Statehood Centennial Celebration, to honor farm and ranch families with century-long connections to the land and recognize Oregon's rich agricultural heritage.

The program is administered through a partnership with the Oregon Farm Bureau, the Oregon Department of Agriculture, the State historic Preservation Office, OSU Libraries' – Special collections and Archives Research Center (SCARC) and community members throughout Oregon.

Christmas Special Fruitcake

Christmas fruitcake may not be your favorite, and some folks actually turn up their nose at all those candied fruits, but you'll love this rich, nutty version!

TOTAL TIME:	YIELD:
Prep: 15 min.	24 servings
Bake: 1-3/4 hours + cooling	

Ingredients

- 3 cups coarsely chopped Brazil nuts or other nuts (walnuts, pecans or hazelnuts)
- 1 pound pitted dates, coarsely chopped
- 1 cup halved maraschino cherries
- 1 cup all-purpose flour
- 1/4 cup butter (not soft/spread)
- 3/4 cup sugar
- 1/2 teaspoon baking powder
- 1/2 teaspoon salt
- 3 large eggs
- 1 teaspoon vanilla extract

Directions

1. In a large bowl, combine the nuts, dates and cherries. Combine the flour, sugar, baking powder and salt; add to nut mixture, stirring until nuts and fruit are well coated.
2. In a small bowl, beat eggs until foamy; stir in vanilla. Fold into nut mixture and mix well. Pour into a greased and parchment paper-lined 9x5-in. loaf pan. Place additional nuts and cherries cut into fourths on top for decoration.
3. Place in oven. Place a separate pan of water in the oven either on a rack underneath or beside the fruitcake (helps with a more even, gentle cooking). Bake at 300° for 13/4 - 2 hours or until a toothpick inserted in the center comes out clean. Water may need to be replenished during baking.
4. Cool for 10 minutes before removing from pan to a wire rack.

Recipe credit: Taste of Home - www.tasteofhome.com/recipes/Christmas-fruitcake/

Growing a Quality Wheat Crop with Glyphosate

National Association of Wheat Growers, www.wheatworld.org

This blog is the second in a five-part series, titled "The Facts About Glyphosate", sharing the facts about glyphosate and its use in the wheat industry.

The U.S. produces one of the best wheat crops in the world. It is the only country that can supply all six classes of wheat in large and reliable quantities at the highest quality, year in and year out. Each year, US wheat growers face different production challenges that may affect their financial stability. Because farming is their livelihood, growers are motivated to deliver a superior crop to market, which ultimately will become a wholesome product on the table of consumers.

Every year brings a new set of environmental conditions, and a new set of stresses to affect the wheat crop. Wheat growers rely upon tools and products designed to help the wheat plant alleviate these stresses. A grower will determine which tool is the most effective at reducing the stress to ensure a quality grain crop at harvest. For instance, in the southern Plains last fall, weather conditions were favorable to the growth of volunteer wheat prior to the new wheat crop planting. Volunteer wheat (a weed) can harbor a virus (wheat streak mosaic virus) and the curl mite that spreads it. Using glyphosate to prevent volunteer wheat from growing and infecting the new healthy crop is one management decision growers will make. If wheat streak mosaic virus is allowed to establish, unfortunately there is nothing that can be done to treat the infected plants and stop the spread of the disease. This virus causes yield loss and very small, light grain of poor quality. There are many management decisions a grower makes in a production year, and these decisions will direct which tools and resources a farmer will employ in his or her operation.

In our first "Truth about Glyphosate" blog, we explained that more than 65 percent of wheat acres do not receive any glyphosate application at all. Most of the remaining 33 percent of acres receive an application of glyphosate to help manage weeds. These applications occur before planting, at planting or after planting but before wheat emergence.

Another labeled, authorized use of glyphosate that growers have at their disposal, is to apply to the crop prior to harvest. The U.S. Environmental Protection Agency (EPA), which regulates all pesticides including herbicides like glyphosate, refers to this use as a "pre-harvest' treatment.

Pre-harvest applications occur on 3 percent or less of wheat acres in the U.S. These applications are made after the wheat plant has shut down, when wheat kernel development is complete and the crop has matured, just a little more than 7 days prior to harvest. Therefore, the wheat plant is not absorbing the glyphosate, but the green weeds in the fields will be killed by the glyphosate. For farmers in the northern plains, this can be an important tool, helping complete a harvest that otherwise would not occur in some years of wet weather and increased weed competition. These conditions threaten harvest and can cause delays in the short growing season in the north.

The trace pesticides left in treated products or crops are called "residues". A maximum residue level, or tolerance level determined by EPA, is the highest level of a pesticide residue legally tolerated in a food or feed when pesticides are applied under their label and considered by EPA to be safe. In the case of glyphosate, the label instructs farmers to apply a pre-harvest treatment when the wheat kernel is 30% moisture or less after grain development. The amount of glyphosate on the harvested wheat after a pre-harvest treatment has repeatedly tested well below the EPA approved maximum level.

If there was one part per billion of an herbicide residue in a 1 lb loaf of bread, a person weighing 150 pounds would **have to eat 36,000 loaves in a day to reach the acceptable daily intake**. Similarly, a person would need to drink **over 50,000 bottles of beer or eat 450,000 standard 1.5 oz servings of oatmeal per day**.

Regulatory bodies and scientific institutions have conducted science-based evaluations and concluded that typical glyphosate usage does not pose an unreasonable health risk to humans, when used according to label directions. For more than 40 years, the EPA has determined, through risk assessments and science-based evaluations, glyphosate is non-carcinogenic to humans. Glyphosate-based herbicides have had a long history of safe use in the U.S. and other countries.

Wheat growers rely on the federal government to make safety determinations and data, research and scientific evidence to make educated management decisions, and wheat growers also ensure they adhere to the regulations on use of pesticides set forth by the EPA. The decisions growers make day after day, year after year, on their farms are well-informed, carefully determined through adherence to US regulations and are ethically sound. The next time you consume bread, pasta, cereal or any other food made from wheat, think about the U.S. wheat farmer who proudly produces the safe, high-quality crop that found its way to your kitchen table.

CALLING ALL HIGH SCHOOL SENIORS

The deadline to apply for the 2019 Oregon Wheat Foundation Scholarships is February 1st.

Up to twelve $1,000 scholarships are awarded each year to graduating seniors who are enrolling in higher education. To be eligible for this award, the student's family must be a grower member of the OWGL or an employee of a grower member. The scholarship is also offered to high school seniors who work part time for a grower member.

Full details and the application are available online at **www.owgl.org/foundation**.

Oregon WheatPAC

Contribution Form

Did you know there is a tax-free way you can help support the efforts of **WheatPAC** and Wheat Growers in their advocacy before the Legislature?

Our Political Action Committee, **OR WheatPAC**, allows us to support our Legislative champions and invest in new relationships to continue our successful advocacy on our growers' behalf.

Oregon provides a unique Political Tax Credit that allows a couple to contribute up to $100 (up to $50 for an individual) and receive the entire credit, dollar-for-dollar, back on their State taxes. That means if you contribute $100 today to **Oregon WheatPAC** your tax liability in 2018 will be reduced by $100.

This is essentially "free money" that you can direct to support our vital efforts at the Capitol…instead of losing it by failing to make a contribution by December 31st!

Just send your check today with this form or call the OWGL office to contribute with your credit card. Together we can make a difference, but we need your help to make this happen!

Mail your contribution to **Oregon WheatPAC** at 115 SE 8th St, Pendleton, OR 97801 or via phone to 541-276-7330.

I'm in! My donation amount: $500___ $250___ $100 ___ $50___ Other $_____

Name:_____

Address_____ City/State/Zip_____

Phone_____Email:_____

Information required by Oregon Secretary of State: _____ Business contribution _____ Personal contribution

Payment Information: (Please make your check payable to **Oregon WheatPAC**)

Check #_____ Visa_____ MasterCard_____ Discover_____

Card number:_____Expiration Date_____

Name on Card:_____

Signature:_____

Thank you for your contribution!

**Contact your tax preparer for details*

Oregon WheatPAC Tax ID #20-5086793

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